Work Order ID 106677

September-11-13 11:18:16 AM

106677

Item ID:	D3550-1	**Accept**	*N900040100*
Revision ID:			
Item Name:	Strut		

Setup **Start** *NS1* **Stop** *NS2*

Start Date:	10/17/13	**Start Qty:**	4.00	*4*	**Cust Item ID:**
Required Date:	10/17/13	**Req'd Qty:**	4.00	*4*	**Customer:**
Reference:					

Run **Start** *NR1* **Stop** *NR2*

Approvals:	**Process Plan:**	MLJ	**Date:** 13-09-13	**Tooling:**		**Date:**	
	QC:		**Date:**	**SPC (Y/N):**		**Date:**	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Draw Nbr	Revision Nbr
D3550	Rev B

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100 *100* Brake NC Brake NC	NC BRAKE Memo 1-Form per Dwg D3550 using DT 8012	0.00 0.00				4	SAD	13/11/01	
110 *110* Small Fab Small Fab	Small Fab Memo 1-form other end of strut at 1.8" using DT 89842-Deburr if necessary.	0.00 0.00				4	SAD	13/11/01	
120 *120* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 DAS 27 9-89 0.00 13 11 04				4			

DQA: ________ Date: ____________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ____________________

Part No. ____________________

NCR No. ____________________

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other ____
☐ Ripples in Bend	☐ Drill Holes	☐ Offset		____
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration		____
☐ Turning Sequence	☐ Finish	☐ Out of Sequence		____
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

Work Order ID 106677 *106677*

September-11-13 11:18:16 AM

Item ID: D3550-1 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Strut

Start Date: 10/17/13 **Start Qty:** 4.00 *4* **Cust Item ID:**

Required Date: 10/17/13 **Req'd Qty:** 4.00 *4* **Customer:**

Reference:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** ______ **Date:** ______ **Tooling:** ______ **Date:** ______

QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel M126829 **Memo** START TIME: 1:15 OVEN TEMPERATURE: 400° FINISH TIME: 1:45	0.00 0.00				4	∅	13-11-4	DAS 34 9-89
140 *140* QC Quality Control	QC3- Inspect Part Finish **Memo**	0.00 0.00	DAS 27 9-89 13 11 05			4			
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: ST253 **Memo**	0.00 0.00				4X			DAS 26 9-89 13-11-5

DQA: ________ Date: ____________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ____________________

Part No. ____________________

NCR No. ____________________

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other
☐ Ripples in Bend	☐ Drill Holes	☐ Offset		
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration		
☐ Turning Sequence	☐ Finish	☐ Out of Sequence		
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

Work Order ID 106677

September-11-13 11:18:16 AM

106677

Item ID:	D3550-1	**Accept**	*N900040100*	**Setup** **Start** *NS1*
Revision ID:				**Stop** *NS2*
Item Name:	Strut			
Start Date:	10/17/13	**Start Qty:** 4.00	*4*	**Cust Item ID:**
Required Date:	10/17/13	**Req'd Qty:** 4.00	*4*	**Customer:**
Reference:				

Approvals: **Process Plan:** ______ **Date:** ______ **Tooling:** ______ **Date:** ______ **Run** **Start** *NR1*

QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160*	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	**Memo**	0.00							

13-11-7

TMF 13-11-06

DQA: ________ Date: ______________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ______________________

Part No. ______________________

NCR No. ______________________

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐
- ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other ______________________

____

____

____

Picklist Print

September-11-13 11:18:16 AM

Work Order ID: **106677**

Parent Item: **D3550-1**

Parent Item Name: Strut

Start Date: 10/17/13 **Required Date:** 10/17/13

Start Qty: 4.00 **Required Qty:** 4.00

Comments: IPP A 07.02.05 New iwssue EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.500W.049 304 RD Tube .500 x .049W		Purchased	No			110	f	359.9887	**1.7**	**7.1578948**			

SHD 13-11-04

Location		Loc Qty	Loc Code	
GA		43.66		
	120633	43.66		
MAT017		316.328716		
	119087	0.000016		
	123449	86.0547		
	125513	30.274		
	m126466	200		7.1579

DQA: ________ Date: ____________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ____________

Part No. ____________

NCR No. ____________

DISPOSITION

- [ ] Rework
- [ ] Scrap
- [ ] Use-as-is
- [ ] Work Order Update

AGAINST DEPARTMENT/PROCESS

- [ ] Skid-tube
- [ ] Machining
- [ ] Thermoforming
- [ ] Large Fab
- [ ] Crosstube
- [ ] Small Fab
- [ ] Finishing
- [ ] Composite
- [ ] Water Jet
- [ ] Prod. Eng. Coor.
- [ ] Rec/Store/Packaging
- [ ] Supplier
- [ ] Engineering
- [ ] Quality
- [ ] Other
- [ ]

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

- [ ] Bending
- [ ] Centre Not Concentric to O/S
- [ ] Cracks
- [ ] Crushed/Crimped
- [ ] Cuffs
- [ ] Heat Treat
- [ ] Inspection Strip in Tube
- [ ] Ripples in Bend
- [ ] Torque Waves in Extrusion
- [ ] Turning Sequence
- [ ] Wave/Twist in Tube

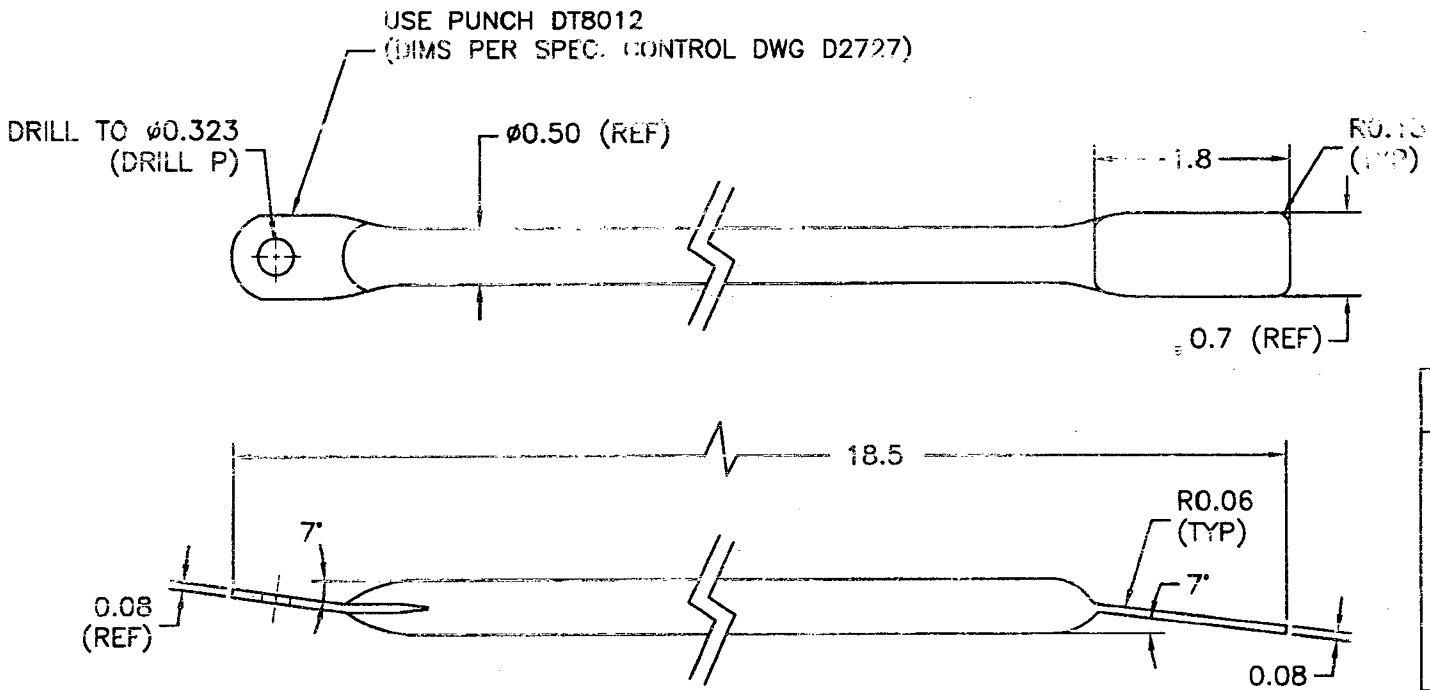
General

- [ ] Bend
- [ ] BOM/Route
- [ ] Broken/Damaged
- [ ] Burrs
- [ ] Contamination
- [ ] Countersink
- [ ] Cut Too Short
- [ ] Drill Holes
- [ ] Drawing
- [ ] Finish
- [ ] Folio
- [ ] Grain
- [ ] Hardware
- [ ] Inspection Incomplete
- [ ] Instructions Incomplete/Unclear
- [ ] Maintenance
- [ ] Mislabeled
- [ ] Misread
- [ ] Offset
- [ ] Out of Calibration
- [ ] Out of Sequence
- [ ] Outside Dimensions
- [ ] Ovalized
- [ ] Over/Under tolerance
- [ ] Part Incorrect
- [ ] Part Lost/Missing
- [ ] Part Moved
- [ ] Positioned Wrong
- [ ] Power Loss/Surge
- [ ] Pressure/Forced
- [ ] Temperature/Cure
- [ ] Weld
- [ ] Wrong Stock Pulled
- [ ] Other ____________

____

____

____



D3550-1 STRUT

106677 MCS
13-09-13

RELEASED
07-02-27

NOTES:
1) MATERIAL: 304/316 SS SEAMLESS ROUND TUBE 0.500 OD X 0.049 WALL
(REF DART SPEC M304TR0.500W.049)
2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
5) BREAK ALL SHARP CORNERS TO 0.010 MAX
6) IDENTIFY WITH P/N D3550-1 USING FINE POINT PERMANENT INK MARKER

DART

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DESIGN	DRAWN BY	DRAWING NO.	REV.
CHECKED	APPROVED	D3550	B
DATE 07.02.13		TITLE STRUT	SHEET 1 OF 1
			SCALE NTS

REV	DATE	DESCRIPTION
A	06.10.24	NEW ISSUE
B	07.02.13	18.5 WAS 20.13; 1.8 WAS 1.5

DART AEROSPACE LTD

DART AEROSPACE

Description: Strut	Work Order: 10667

Inspection Drawing: D3550-1	Rev: B	Part Number: D3550-1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
18.5	+/- 0.100	18.5	✓		M-T	SAD-1
0.080	+/- 0.010	0.100	✓		Vern	SFab-14
7°	+/- 1/2	7°	✓		Angle Level	SFab-05
0.323		0.326	✓		Vern	SFab-14
1.8	+/- 0.100	1.79	✓		Vern	SFab-14
0.7	+/- 0.100	0.7	✓		Vern	SFab-14
0.08	+/- 0.030	0.100	✓		Vern	SFab-14
7°	+/- 1/2	7°	✓		Angle Level	SFab-05

Measured by: SAD	Checked By: [signature]	QC inspector: QC 27 9-89	Engineering Approval (*if necessary*):
Date 13/11/01	Date 13-11-01	Date 13 11 01	Date

H:\FORMS\Quality Assurance\approved QA\Inspection sheet revA